



An Approach to Sustainability for Smallholder Dairy Systems Through Animal Welfare Practices

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Background

- ✓ Good Agricultural Practices (GAP) are procedures to obtain agricultural products, pursuing sustainability in the social, environmental and economic aspect. In Good Dairy Practices (GDP) the aim is sustainable milk production
- ✓ Animal welfare (AW) is a main topic for GDP. It has a direct impact on growth, reproduction and production rates, leading to a superior animal performance
- ✓ Ethical animal handling, sanitary safety, quality of dairy products and environmentally friendly practices are new consumers and market demands, that challenge dairy farming
- ✓ Traditional milking practices, low milk yields, adverse environmental conditions, misuse of natural resources and poor infrastructure of small dairy farmers, obstruct good quality and constant milk production
- ✓ In the study area Itava, Rio de Janeiro State - Brazil, both constraints and potentials were identified to implement GDP, support farmers to increase production, achieve higher milk quality and improve their livelihoods. Figure 1.

Research Area

Itava, Rio de Janeiro State - Brazil:

- ✓ Strong rural economic activity based on milk production



Figure 2. Landscape of Itava - Installations for milking and animal handling areas - Source: Own collection, 2015

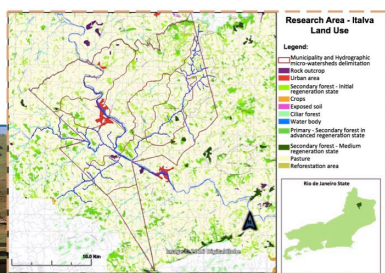


Figure 1. Itava, Rio de Janeiro State, Brazil - Land use. Source: Instituto Brasileiro de Geografia e Estatística (IBGE), 2002

- ✓ Traditional and precarious animal handling practices
- ✓ Pastoralism, strong deforestation and high land degradation. Figure 2.

Methods

- ✓ Conceptual framework: Dairy farming main production activities with major influence on AW, essential to have an efficient, sustainable, productive and profitable dairy farm



Figure 3. Dairy farm main activities to improve productivity and profits based on GDP and animal welfare - Source: (Doyle and Moran, 2015)

- ✓ Farming systems analysis, centered on the livestock component
- ✓ Data collection: through semi-structured interviews. March to May 2015
- ✓ Data Analysis: through a parameters and indicators system, scoring from 1 (very bad state) to 5 (very good state). Figure 5.

Based on these main dairy farming activities described by Doyle Moran, 2015; The GDP described by FAO - International Dairy Federation, 2011 and 'The guide to the good animal welfare' by International Dairy Federation, 2008, a system of parameters and indicators was designed to analyze the farms performance in 7 different components and to identify constraints and potentials for animal welfare and GDP. Figure 5.

Research Approach

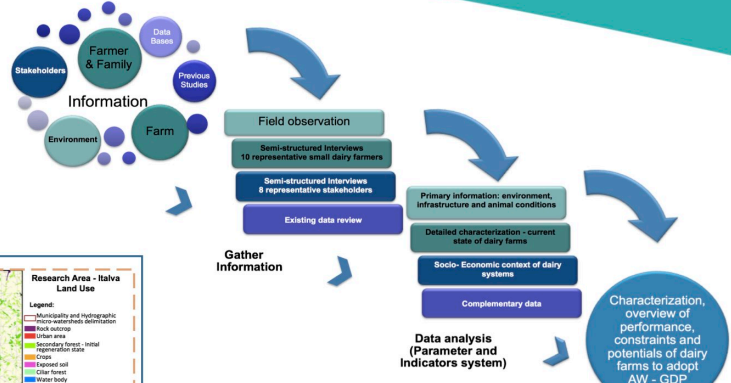


Figure 4. Methods for collection and analysis of information

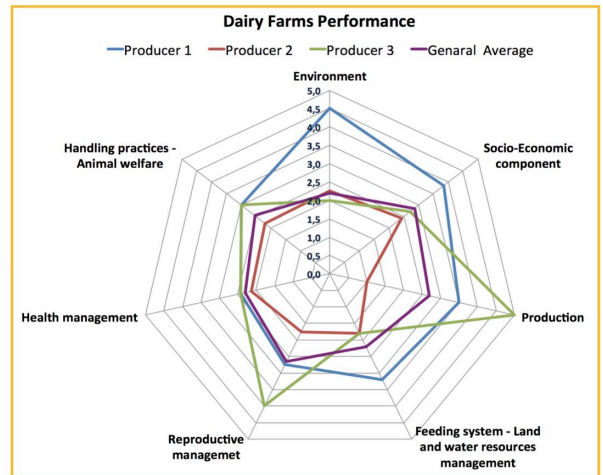


Figure 5. Dairy farms performance in the selected components

Results

- ✓ Graphic overview about the state and performance of the dairy farms evaluated. Figure 5.
- ✓ The main constraints and potentials are described in Figure 6.

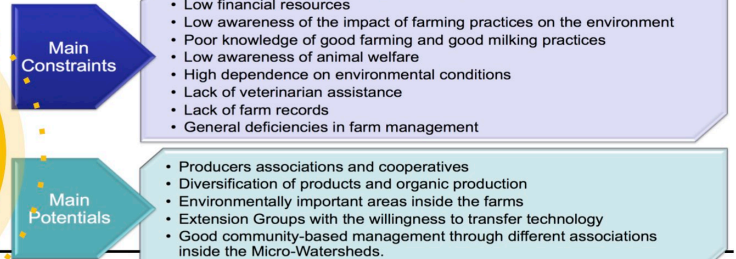


Figure 6. Main Constraints and Potentials of smallholder dairy systems for to adopt animal welfare measures and GDP - Itava, Rio de Janeiro State - Brazil

Conclusions and Recommendations

Next Steps

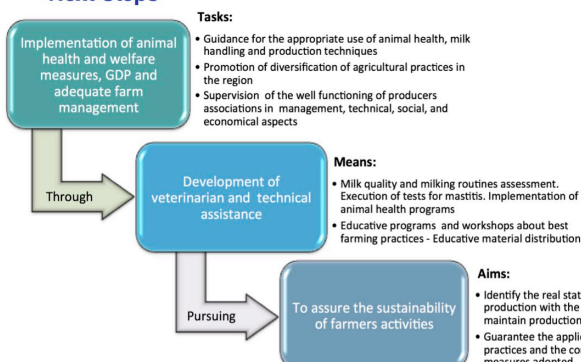


Figure 7. Next steps to improve small dairy producers livelihoods in a permanent way

- ✓ The application of AW practices represent a useful method to alleviate the constraints of small dairy farmers to accomplish the standards established by legislations, consumers and market, while protecting the environment
- ✓ It is important to promote a change of inappropriate habits and procedures of small dairy farmers using technical support and guidance along the production process for the implementation of AW and GDP measures
- ✓ The small dairy farmers associations, their willingness to improve and good community-based management, are their strongest potentials. These are the characteristics that give them the resources to compete and to achieve enduring access to a more and more demanding market

References

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Figure 8. Girolando Cow (main dairy breed in Brazil) in an experimental silvopastoral system - Itava. Source: Own collection 2016